

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Figure 1

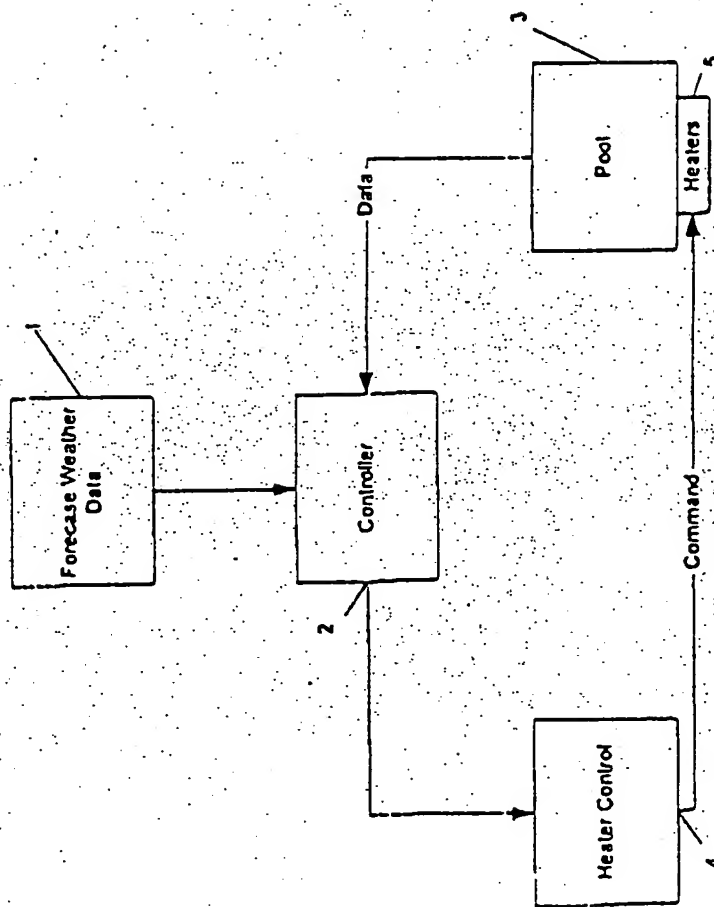


Figure 2

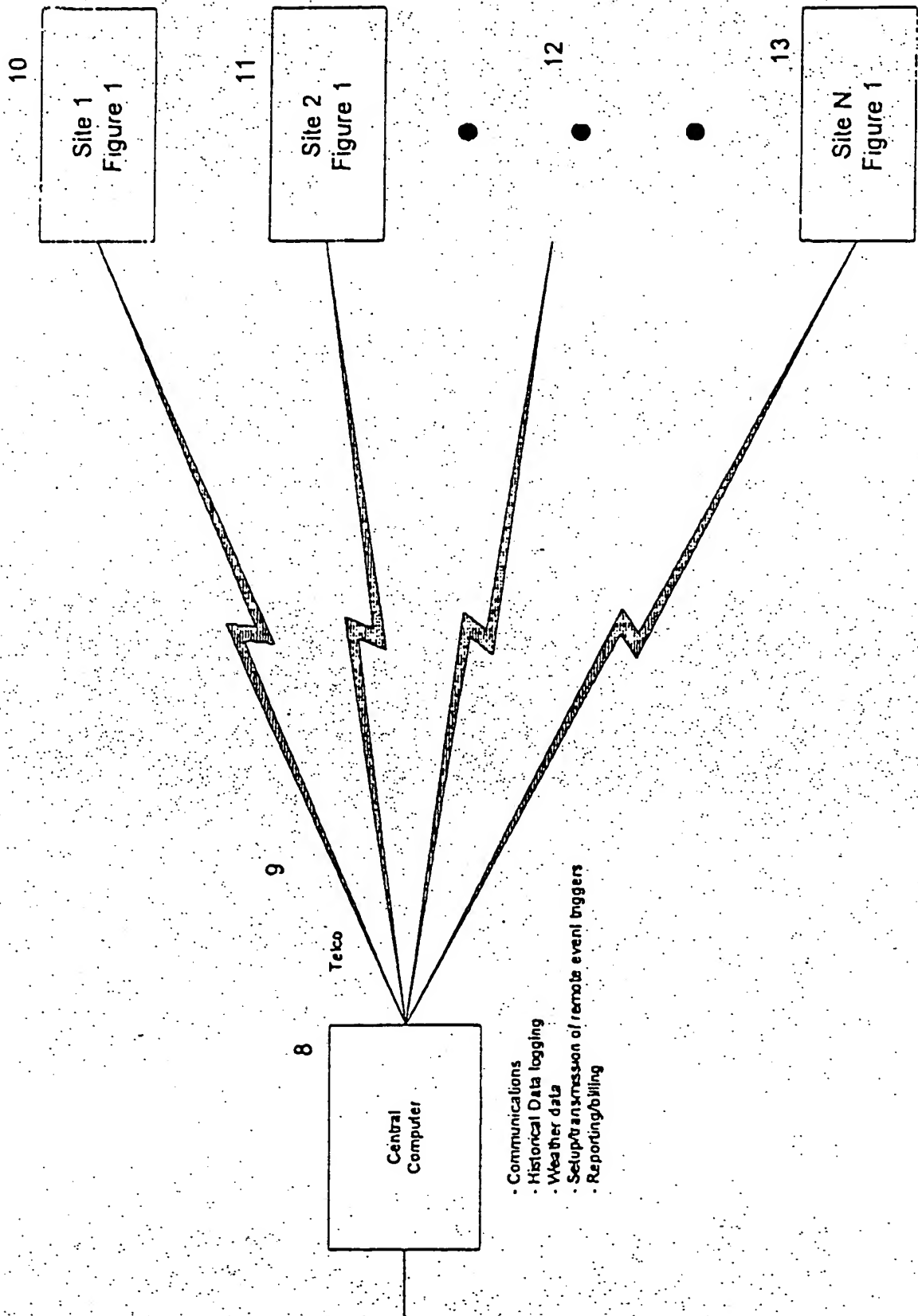


Figure 3

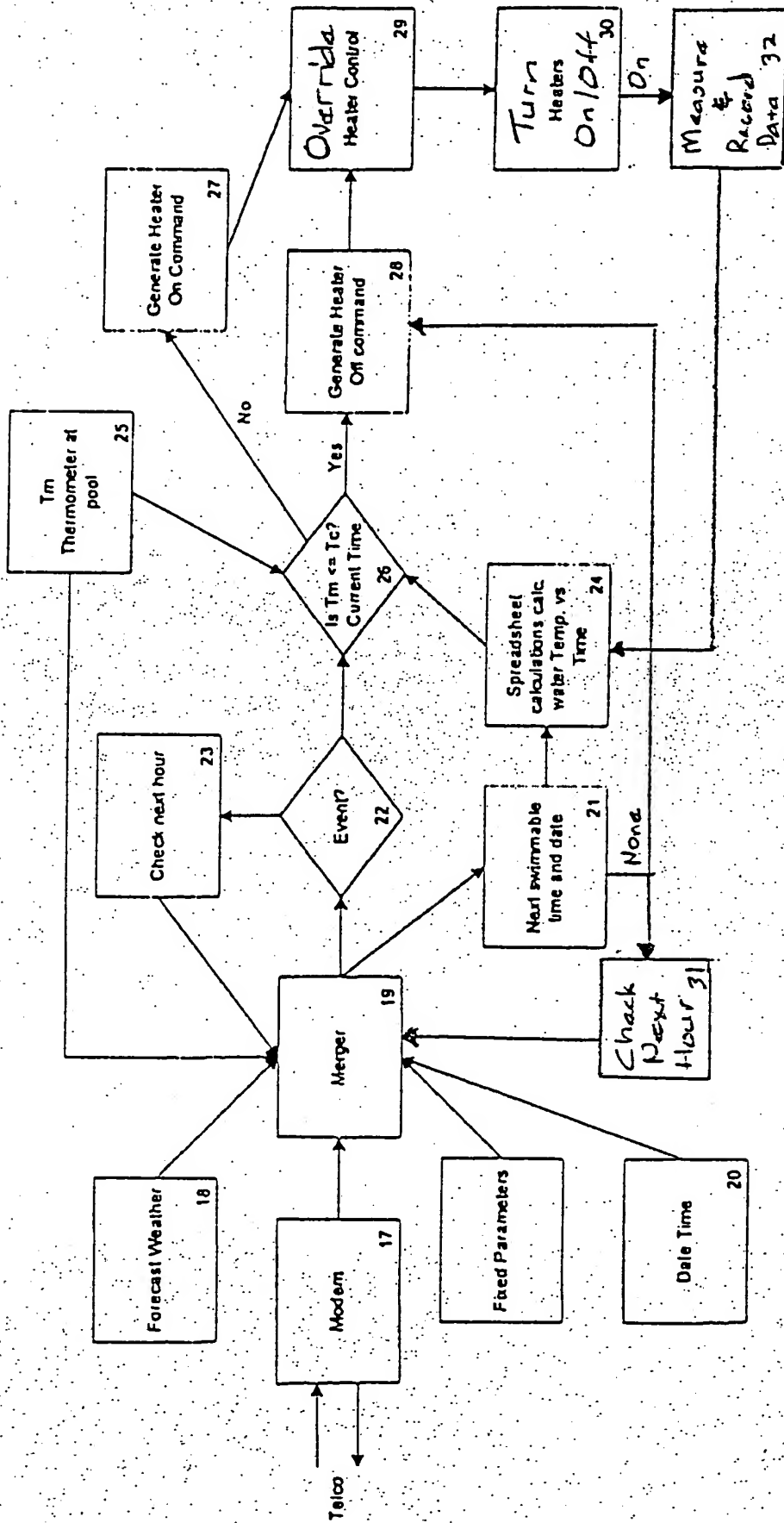


Figure 4

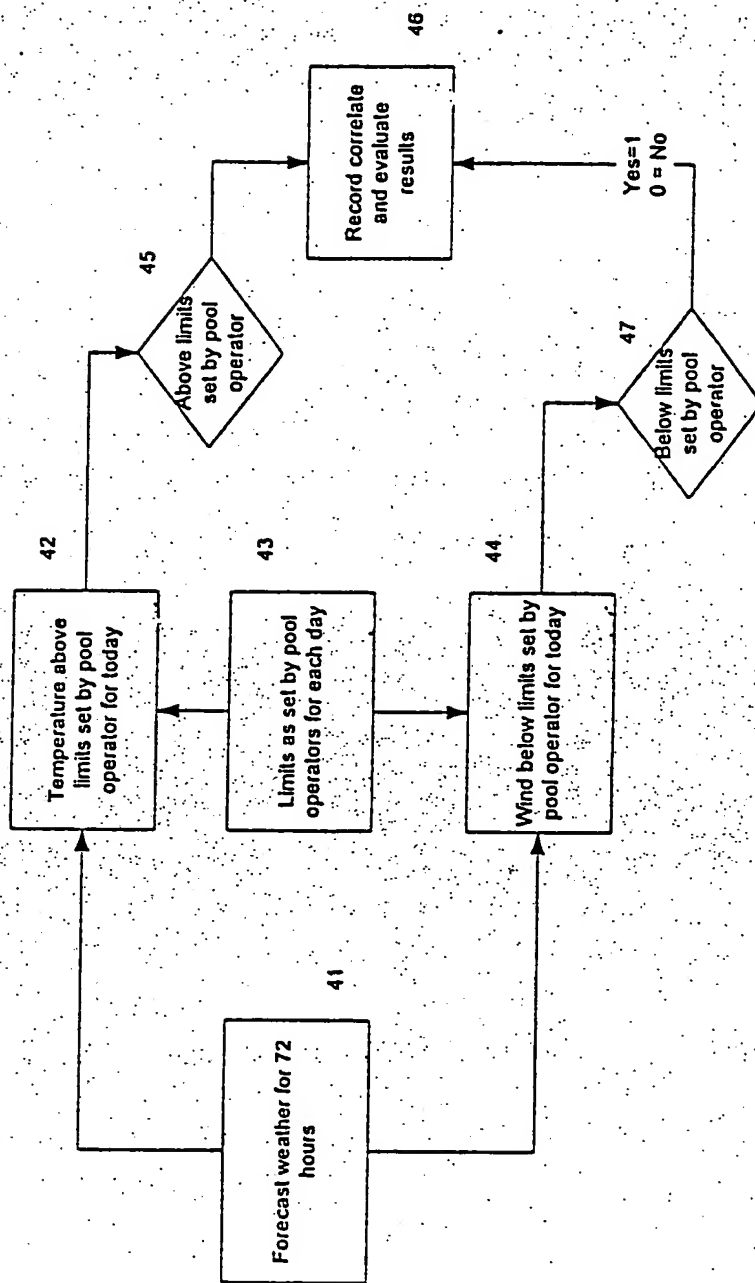


Figure 5 -

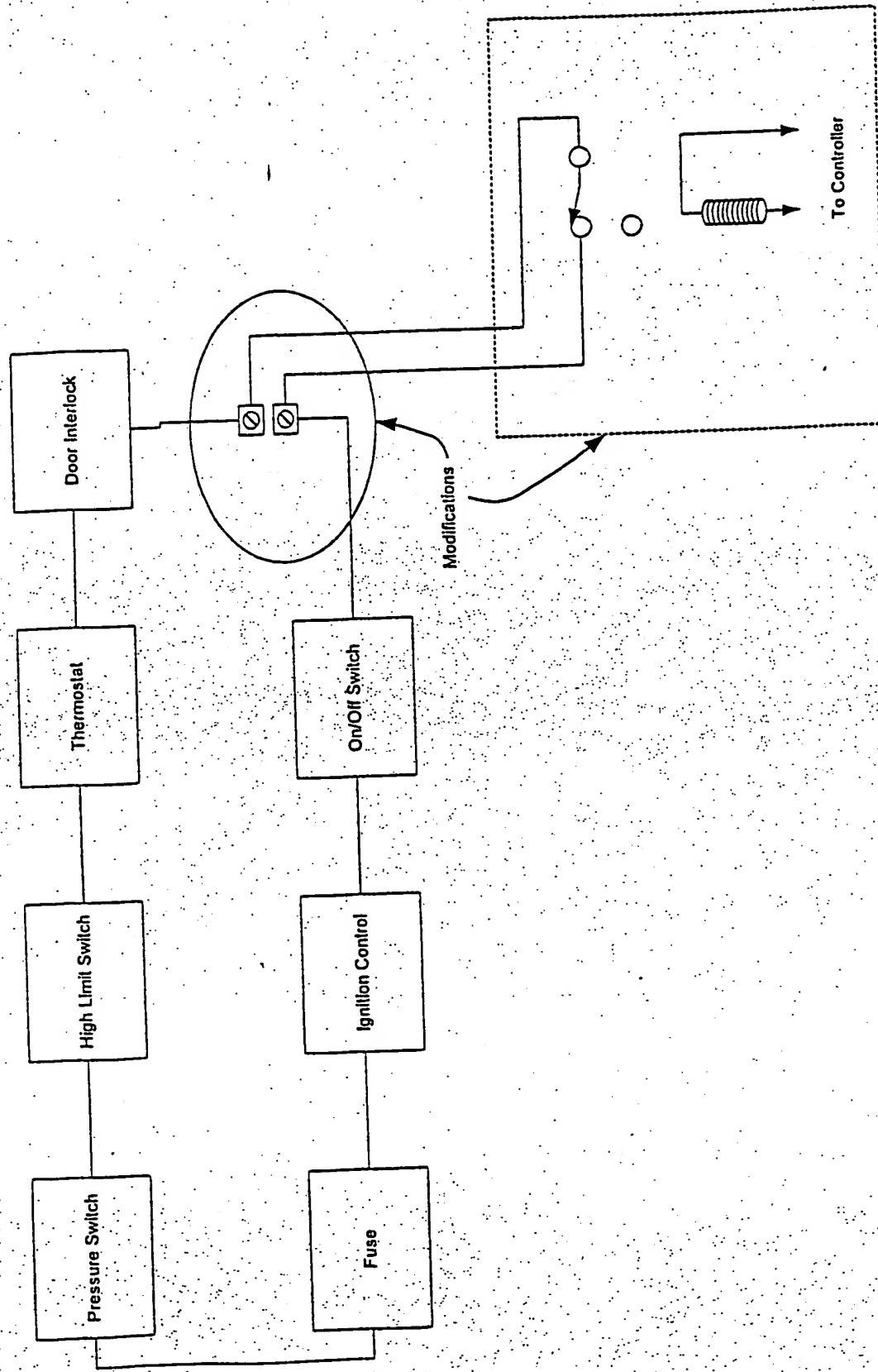
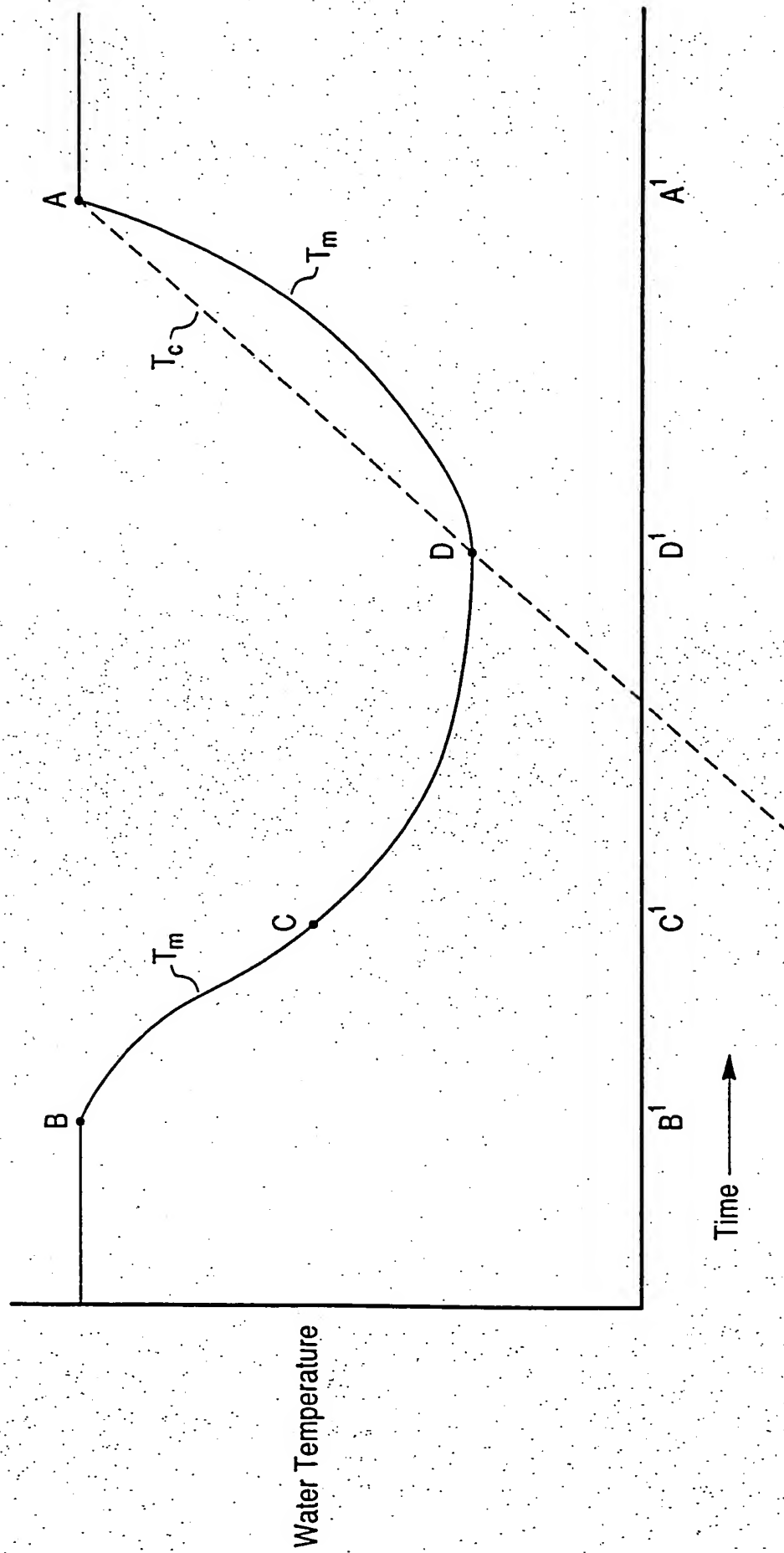


Fig. 6



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	1/15/10	10:01AM																			
2	Area F'	2,400																			
3																					
4	lbs of water	823,455																			
5	Oh Btu/s/hr	2,460,000																			
6																					
7	ΔTh	2.99																			
8	Altitude feet	2300																			
9																					
10																					
11		FinalNov19																			
12																					
13																					
14	1/15/10	10:00 AM	0.0	90.0	55.0	45.0	31.4	34.1	0.10	70.0											
15	1/15/10	11:00 AM	1.0	90.0	55.0	45.0	31.4	34.1	0.10		25.4	0.08	-0.01	15.0	555	509	-0.01	-0.22	0.00	0.20	5.00
16	1/15/10	12:00 PM	2.0	90.0	55.0	45.0	31.4	34.1	0.10		28.7	0.09	0.01	15.0	566	509	0.03	-0.18	0.00	0.20	5.15
17	1/15/10	1:00 PM	3.0	90.0	55.0	45.0	31.4	34.1	0.10		32.1	0.10	0.02	15.0	602	509	0.05	-0.15	0.00	0.20	5.30
18	1/15/10	2:00 PM	4.0	90.0	55.0	45.0	31.4	34.1	0.10		35.4	0.12	0.03	15.0	618	509	0.07	-0.13	0.00	0.20	5.60
19	1/15/10	3:00 PM	5.0	90.0	55.0	45.0	31.4	34.1	0.10		38.6	0.13	0.05	15.0	634	509	0.10	-0.11	0.00	0.20	5.75
20	1/15/10	4:00 PM	6.0	90.0	55.0	45.0	31.4	34.1	0.10		41.8	0.15	0.07	15.0	666	509	0.17	-0.08	0.00	0.20	5.90
21	1/15/10	5:00 PM	7.0	90.0	55.0	45.0	31.4	34.1	0.10		44.9	0.17	0.09	15.0	682	509	0.20	-0.03	0.00	0.20	6.05
22	1/15/10	6:00 PM	8.0	90.0	55.0	45.0	31.4	34.1	0.10		48.0	0.18	0.11	15.0	698	509	0.24	-0.01	0.00	0.20	6.20
23	1/15/10	7:00 PM	9.0	90.0	55.0	45.0	31.4	34.1	0.10		51.0	0.21	0.13	15.0	712	509	0.28	0.01	0.10	0.00	6.35
24	1/15/10	8:00 PM	10.0	90.0	55.0	45.0	31.4	34.1	0.10		54.0	0.23	0.15	15.0	726	509	0.33	0.04	0.10	0.00	6.50
25	1/15/10	9:00 PM	11.0	90.0	55.0	45.0	31.4	34.1	0.10		56.5	0.25	0.17	15.0	740	509	0.37	0.06	0.11	0.00	6.65
26	1/15/10	10:00 PM	12.0	90.0	55.0	45.0	31.4	34.1	0.10		59.1	0.27	0.20	15.0	753	509	0.42	0.08	0.12	0.00	6.80
27	1/15/10	11:00 PM	13.0	90.0	55.0	45.0	31.4	34.1	0.10		61.5	0.29	0.22	15.0	766	509	0.47	0.10	0.12	0.00	6.95
28	1/15/10	12:00 PM	14.0	90.0	55.0	45.0	31.4	34.1	0.10		63.9	0.32	0.25	15.0	779	509	0.53	0.13	0.13	0.00	7.10
29	1/16/10	1:00 AM	15.0	90.0	55.0	45.0	31.4	34.1	0.10		66.2	0.34	0.27	15.0	792	509	0.58	0.15	0.13	0.00	7.25
30	1/16/10	2:00 AM	16.0	90.0	55.0	45.0	31.4	34.1	0.10		68.4	0.37	0.30	15.0	804	509	0.64	0.17	0.14	0.00	7.40
31	1/16/10	3:00 AM	17.0	90.0	55.0	45.0	31.4	34.1	0.10		70.5	0.40	0.33	15.0	816	509	0.70	0.19	0.14	0.00	7.55
32	1/16/10	4:00 AM	18.0	90.0	55.0	45.0	31.4	34.1	0.10		72.5	0.42	0.35	15.0	827	509	0.77	0.21	0.15	0.00	7.70
33	1/16/10	5:00 AM	19.0	90.0	55.0	45.0	31.4	34.1	0.10		74.5	0.45	0.38	15.0	838	509	0.85	0.23	0.15	0.00	7.85
34	1/16/10	6:00 AM	20.0	90.0	55.0	45.0	31.4	34.1	0.10		76.3	0.48	0.41	15.0	850	509	0.86	0.25	0.15	0.00	8.00
35	1/16/10	7:00 AM	21.0	90.0	55.0	45.0	31.4	34.1	0.10		78.1	0.51	0.45	15.0	863	509	0.87	0.28	0.15	0.00	8.15
36	1/16/10	8:00 AM	22.0	90.0	55.0	45.0	31.4	34.1	0.10		80.0	0.54	0.45	15.0	863	509	0.87	0.28	0.15	0.00	8.30
37	1/16/10	9:00 AM	23.0	90.0	55.0	45.0	31.4	34.1	0.10		82.0	0.54	0.45	15.0	863	509	0.90	0.00	0.00	0.00	8.45

Figure 7A

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	1/16/10	9:01AM																				
2	Area F2	2,400																				
3	0																					
4	lbs of water	823,455																				
5	Qh Blu/s/hr	2,460,000																				
6	0																					
7	ΔTh	2.99																				
8	Altitude feet	2,300																				
9																						
10	sh5																					
11			Finalnov19																			
12																						
13																						
14	1/15/10	10:00 AM																				
15	1/15/10	11:00 AM																				
16	1/15/10	12:00 PM																				
17	1/15/10	1:00 PM																				
18	1/15/10	2:00 PM																				
19	1/15/10	3:00 PM																				
20	1/15/10	4:00 PM																				
21	1/15/10	5:00 PM																				
22	1/15/10	6:00 PM																				
23	1/15/10	7:00 PM																				
24	1/15/10	8:00 PM																				
25	1/15/10	9:00 PM																				
26	1/15/10	10:00 PM																				
27	1/15/10	11:00 PM																				
28	1/15/10	12:00 PM																				
29	1/16/10	1:00 AM																				
30	1/16/10	2:00 AM																				
31	1/16/10	3:00 AM																				
32	1/16/10	4:00 AM																				
33	1/16/10	5:00 AM																				
34	1/16/10	6:00 AM																				
35	1/16/10	7:00 AM																				
36	1/16/10	8:00 AM																				
37	1/16/10	9:00 AM																				
38																						
39																						

Figure 7B

	A	B	C	D	E	F	G	H	I
1	sh6	Finalnov19							
2	Vm	90	degrees						
3	Vmin(a)	5	mph						
4	WF(m)	0.15							
5									
6	Limit	10	mph						
7									
8			Vwa	Vwa	Vwa	Vwa	Vwa	Sum	Vwc
9		Vwf	[mph]	[mph]	[mph]	[mph]	[mph]		[mph]
10	#	[mph]	a	b	c	d	e		average
11	0	0	5.0	5.0	5.0	5.0	5.0	25.0	5.0
12	0	1	5.2	5.2	5.2	5.2	5.2	25.8	5.2
13	0	2	5.3	5.3	5.3	5.3	5.3	26.5	5.3
14	0	3	5.5	5.5	5.5	5.5	5.5	27.3	5.5
15	0	4	5.6	5.6	5.6	5.6	5.6	28.0	5.6
16	0	5	5.8	5.8	5.8	5.8	5.8	28.8	5.8
17	0	6	5.9	5.9	5.9	5.9	5.9	29.5	5.9
18	0	7	6.1	6.1	6.1	6.1	6.1	30.3	6.1
19	0	8	6.2	6.2	6.2	6.2	6.2	31.0	6.2
20	0	9	6.4	6.4	6.4	6.4	6.4	31.8	6.4
21	0	10	6.5	6.5	6.5	6.5	6.5	32.5	6.5
22	0	12	6.8	6.8	6.8	6.8	6.8	34.0	6.8
23	0	14	7.1	7.1	7.1	7.1	7.1	35.5	7.1
24	0	16	7.4	7.4	7.4	7.4	7.4	37.0	7.4
25	0	18	7.7	7.7	7.7	7.7	7.7	38.5	7.7
26	0	20	8.0	8.0	8.0	8.0	8.0	40.0	8.0
27	0	22	8.3	8.3	8.3	8.3	8.3	41.5	8.3
28	0	24	8.6	8.6	8.6	8.6	8.6	43.0	8.6
29	0	26	8.9	8.9	8.9	8.9	8.9	44.5	8.9
30	0	28	9.2	9.2	9.2	9.2	9.2	46.0	9.2
31	0	30	9.5	9.5	9.5	9.5	9.5	47.5	9.5
32	0	32	9.8	9.8	9.8	9.8	9.8	49.0	9.8
33	0	34	10.1	10.1	10.1	10.1	10.1	50.5	10.1
34	0	36	10.4	10.4	10.4	10.4	10.4	52.0	10.4

Figure7C

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	sh7														
2	Finalnov19														
3															
4	WBAB No.	12842													
5															
6				Sunrise	Sunset				Monthly	Screen	Daily	Daily			
7		Tilt °	*317.2	24hr	24hr				Shade	Room	Rain	Clear	Qs		ΔTs
8	Month	kWh/m ² /day	Blu/F ² /day	Clock	Clock	Hours	Blu/F ² /hr	Ap	Factor	Factor	Factor	Sky	Blu's/hr	lbs H ₂ O	[°F]
9	Jan	3.2	1015	7	19	12	85	2400	0.9	1	1	0.88	160,782	823,455	0.20
10	Feb	4.0	1269	7	19	12	106	2400	0.9	1			0	823,455	0.00
11	Mar	5.1	1618	7	19	12	135	2400	0.9	1			0	823,455	0.00
12	Apr	6.2	1967	7	19	12	164	2400	0.9	1			0	823,455	0.00
13	May	6.4	2030	7	19	12	169	2400	0.9	1			0	823,455	0.00
14	Jun	6.1	1935	7	19	12	161	2400	0.9	1			0	823,455	0.00
15	Jul	5.8	1840	7	19	12	153	2400	0.9	1			0	823,455	0.00
16	Aug	5.5	1745	7	19	12	145	2400	0.9	1			0	823,455	0.00
17	Sep	4.9	1554	7	19	12	130	2400	0.9	1			0	823,455	0.00
18	Oct	4.4	1396	7	19	12	116	2400	0.9	1			0	823,455	0.00
19	Nov	3.6	1142	7	19	12	95	2400	0.9	1			0	823,455	0.00
20	Dec	3.1	983	7	19	12	82	2400	0.9	1			0	823,455	0.00

Figure 7D

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Wx		Rise	Set		Open hr	9:00														
2	1/20/10	Sun	Hours	Hours		Closed hr	21:00														
3	FinalNov19		7	19		# hrs	12														
4																					
5																					
6																					
7	Hour	Day	Time	Sch. open	VwI [MPH]	WvI [DEG]	Ta [°F]	Rha [%]	Tdp [°F]	Rain [%]	VwI [MPH]	Ta [°F]	ReI [%]	VwI [MPH]	Sch. Logic	Wind Logic	Temp. Logic	D Rain Logic	E ABCD		Clear Sky Factor
8	1	1	0:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		
9	2	1	1:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		
10	3	1	2:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		
11	4	1	3:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		
12	5	1	4:00	No	9	90	55	45	34.1	0		55			0	1	0	0	0		
13	6	1	5:00	No	9	90	55	45	34.1	0		55			0	1	0	0	0		
14	7	1	6:00	No	9	90	55	45	34.1	0		55			0	1	0	0	0		
15	8	1	7:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		
16	9	1	8:00	No	15	90	55	45	34.1	0		55			0	0	0	0	0		1.0
17	10	1	9:00	Yes	5	90	55	45	34.1	0	5	55		10	1	1	1	1	1		0.8
18	11	1	10:00	Yes	5	90	58	45	34.1	0	5	58		10	1	1	1	1	1		0.5
19	12	1	11:00	Yes	5	90	61	45	34.1	0	5	61		10	1	1	1	1	1		0.8
20	13	1	12:00	Yes	5	90	64	45	34.1	0	5	64		10	1	1	1	1	1		0.8
21	14	1	13:00	Yes	5	90	67	45	34.1	0	5	67		10	1	1	1	1	1		1.0
22	15	1	14:00	Yes	5	90	70	45	34.1	0	5	70		10	1	1	1	1	1		0.8
23	16	1	15:00	Yes	15	90	73	45	34.1	0	15	73		10	1	1	1	1	1		0.8
24	17	1	16:00	Yes	8	90	76	45	34.1	0	8	76		10	1	1	1	1	1		0.8
25	18	1	17:00	Yes	15	90	79	45	34.1	0	15	79		10	1	1	1	1	1		0.8
26	19	1	18:00	Yes	15	90	82	45	34.1	0	15	82		10	1	1	1	1	1		0.8
27	20	1	19:00	Yes	15	90	85	45	34.1	0	15	85		10	1	1	1	1	1		0.8
28	21	1	20:00	Yes	15	90	82	45	34.1	0	15	82		10	1	1	1	1	1		0.8
29	22	1	21:00	No	15	90	79	45	34.1	0					0	0	0	0	0		
30	23	1	22:00	No	15	90	76	45	34.1	0					0	0	0	0	0		
31	24	1	23:00	No	15	90	73	45	34.1	0					0	0	0	0	0		
32										Sum	113	852	0	120							10.50
33										Avg	9	71	0	10							Number
34										Limit	10	70	80								0.88
35										Logic	1	1	1								

Figure 7E

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Final Nov 19																		
2																			
3	Vwm #																		
4	Time #									Pw-Pdp									
5			Vwf	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
6			1																
7			2																
8			3																
9			4																
10			5																
11			6																
12			7																
13			8																
14			9																
15			10																
16			12																
17			14																
18			16																
19			18																
20			20																
21			22																
22			24																
23			26																
24			28																
25			30																
26			32																
27			34																
28			36																

Figure 7F

	A	B	C	D	E	F	G	H	I
1	FinalNov19								
2									
3									
4									
5									
6									
7									
8	00:01 to 06:00	1	22.5	1		12:01 to 18:00	3	22.5	17
9	00:01 to 06:00	1	67.5	2		12:01 to 18:00	3	67.5	18
10	00:01 to 06:00	1	112.5	3		12:01 to 18:00	3	112.5	19
11	00:01 to 06:00	1	157.5	4		12:01 to 18:00	3	157.5	20
12	00:01 to 06:00	1	202.5	5		12:01 to 18:00	3	202.5	21
13	00:01 to 06:00	1	247.5	6		12:01 to 18:00	3	247.5	22
14	00:01 to 06:00	1	292.5	7		12:01 to 18:00	3	292.5	23
15	00:01 to 06:00	1	337.5	8		12:01 to 18:00	3	337.5	24
16									
17	06:01 to 12:00	2	22.5	9		18:01 to 00:00	4	22.5	25
18	06:01 to 12:00	2	67.5	10		18:01 to 00:00	4	67.5	26
19	06:01 to 12:00	2	112.5	11		18:01 to 00:00	4	112.5	27
20	06:01 to 12:00	2	157.5	12		18:01 to 00:00	4	157.5	28
21	06:01 to 12:00	2	202.5	13		18:01 to 00:00	4	202.5	29
22	06:01 to 12:00	2	247.5	14		18:01 to 00:00	4	247.5	30
23	06:01 to 12:00	2	292.5	15		18:01 to 00:00	4	292.5	31
24	06:01 to 12:00	2	337.5	16		18:01 to 00:00	4	337.5	32

Figure 7G

	A	B
1	Finalnov19	
2		
3		
4		
5	Wmf	
6	[DEG]	Vw Matrix
7	mag.	Number
8	22.5	1
9	67.5	2
10	112.5	3
11	157.5	4
12	202.5	5
13	247.5	6
14	292.5	7
15	337.5	8

Figure 7H